

Lecture Notes – Comparison Operators

Section 1: Lecture Summary

Comparison operators are used in the **WHERE** clause to filter records based on conditional statements. The lecture demonstrates writing queries with operators like **=**, **>=**, **!=** (or **<>**) on tables from **companyDB** and **eCommerceDB**, including retrieving employee details by job title, employees hired since 2020 sorted chronologically, and customer emails excluding a specific city.

Section 2: Key Concepts and Explanations

WHERE clause filters records using comparison operators such as **=** for equality, **>=** for greater than or equal to, and **!=** or **<>** for not equal to. Conditions must match data types, with strings in quotes and dates in 'YYYY-MM-DD' format. **ORDER BY** follows **WHERE** for sorting results chronologically. Analytical queries require simplifying business requirements into precise conditions, identifying the correct table (e.g., **Employees** for job title and hire date), and executing selected queries in MySQL Workbench after **USE** database statement.

Section 3: Example Code and Use Cases

Retrieve detailed profiles of employees with **JobTitle** 'Accountant' from **companyDB**:

```
USE companyDB;  
SELECT * FROM Employees WHERE JobTitle = 'Accountant';
```

Results show one employee (EmpID 12) matching the condition.

Generate chronological listing of employees hired since 2020 from **companyDB**:

```
USE companyDB;  
SELECT * FROM Employees  
WHERE HireDate >= '2020-01-01'  
ORDER BY HireDate;
```

Results display employees from 2020 onward, sorted by **HireDate**.

Extract emails of customers not from 'Delhi' from **eCommerceDB** (assuming **Customers** table with **Email** and **City** columns):

```
USE eCommerceDB;  
SELECT Email FROM Customers WHERE City != 'Delhi';
```

Results list emails excluding Delhi customers.

Section 4: Key Takeaways

Practice comparison operators (**=**, **>=**, **!=**) in **WHERE** clauses to filter exact data. Always specify **USE** database, use quotes for strings and full date format for comparisons, place **ORDER BY** after **WHERE**, and execute selected queries in MySQL Workbench for efficiency. Simplify analytical requirements to write precise SQL statements.